Appendix 5: Updating age, population structure and sociodemographic characteristics

Canada, like many developed countries, maintains population projections based on programs that project each component of population change (i.e., projected births based on historic trends and projections of total fertility rates and number of women). The population projections and related program components are used for a wide range of national planning, both within and outside of government, such as planning the Canadian Pension Plan (within government). Our study's model population structure was updated using the same national standard population projections and components, which for the most part are developed and maintained at Statistics Canada.

When an immigrant actor was newly introduced into the model between 2002 and 2010, their sociodemographic and cardiovascular disease risk was assigned based on a randomly chosen respondent of the same age, sex, province of immigration, and recent immigrant status from the Canadian Community Health Survey 2001. After initialization, immigrants are governed by the same equations as the general population.

Mortality hazards were estimated from vital statistics and other sources.[1] In the model, the risk of dying is evaluated every year of the person's simulated life and is conditional on their year of birth, sex, and age. When a simulated individual develops Acute Myocardial Infarction, their risk of death changes from that of the general population (captured by analyzing Ontario survival data from time of index Acute Myocardial Infarction to death from all causes).

[1]CHMS user information accessible at http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey &SDDS=5071&lang=en&db=imdb&adm=8&dis=2. Accessed on September 27th 2013.